

EXHIBIT E

Exhibit E**Infringement of U.S. Patent No. 7,542,715 by DISH Accused Satellite Television Services**

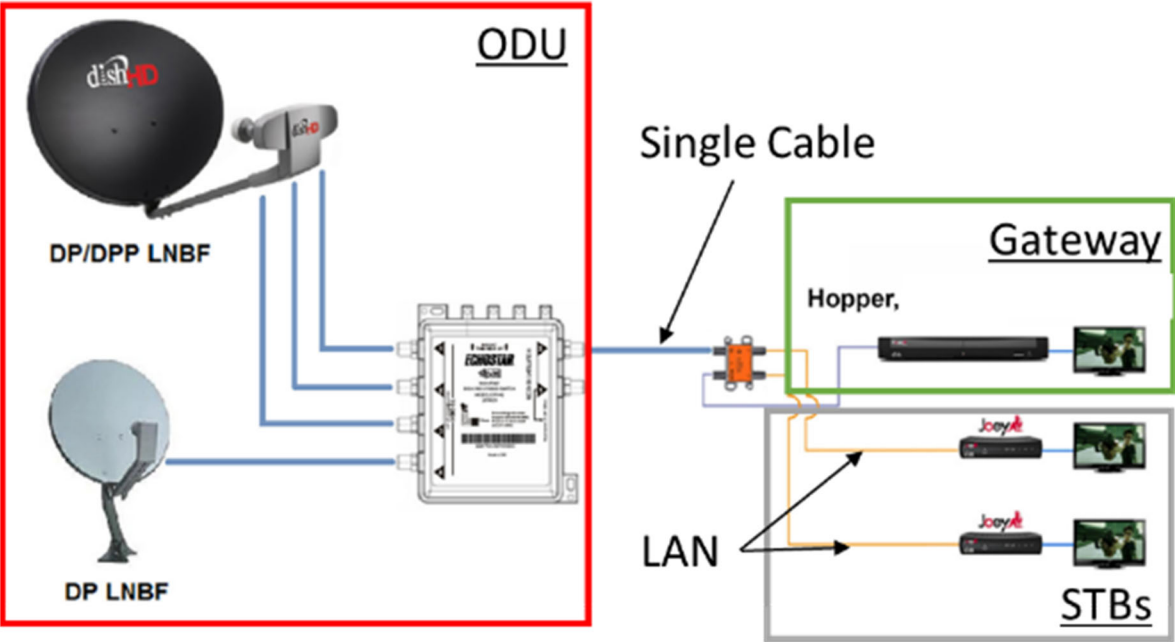
#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
9a	9. A signal distribution system for distributing a plurality of low noise amplifier and block converter (LNB) output signals from a satellite outdoor unit (ODU) comprising:	<p>The Accused Satellite Television Services infringe the asserted claims utilizing, for example, gateway systems, which include Signal Selector and Combiner (“SSC”)-enabled LNBs (for example, DISH Pro Hybrid (“DPH”) LNBs) and switches (for example, DPH42) used with gateways such as the Hopper 3 and corresponding set top boxes. By way of example, the DPH42 and corresponding gateways and set top boxes are charted herein.</p>  <p>The diagram illustrates a signal distribution system. On the left, a red box labeled 'ODU' contains two satellite dishes: the top one is labeled 'DP/DPP LNB' and the bottom one is labeled 'DP LNB'. Both dishes are connected by blue lines to a central switch unit. To the right of the switch, a 'Single Cable' connects to a 'Gateway' box labeled 'Hopper'. Below the Hopper, two 'STBs' (Set Top Boxes) are shown, each connected to a television. The STBs are connected to the Hopper via a 'LAN' connection, indicated by orange lines.</p>
9b	a gateway in communication with the ODU and at least one set top box (STB);	The gateway systems include a gateway in communication with the ODU and at least one set top box (STB) as described below:

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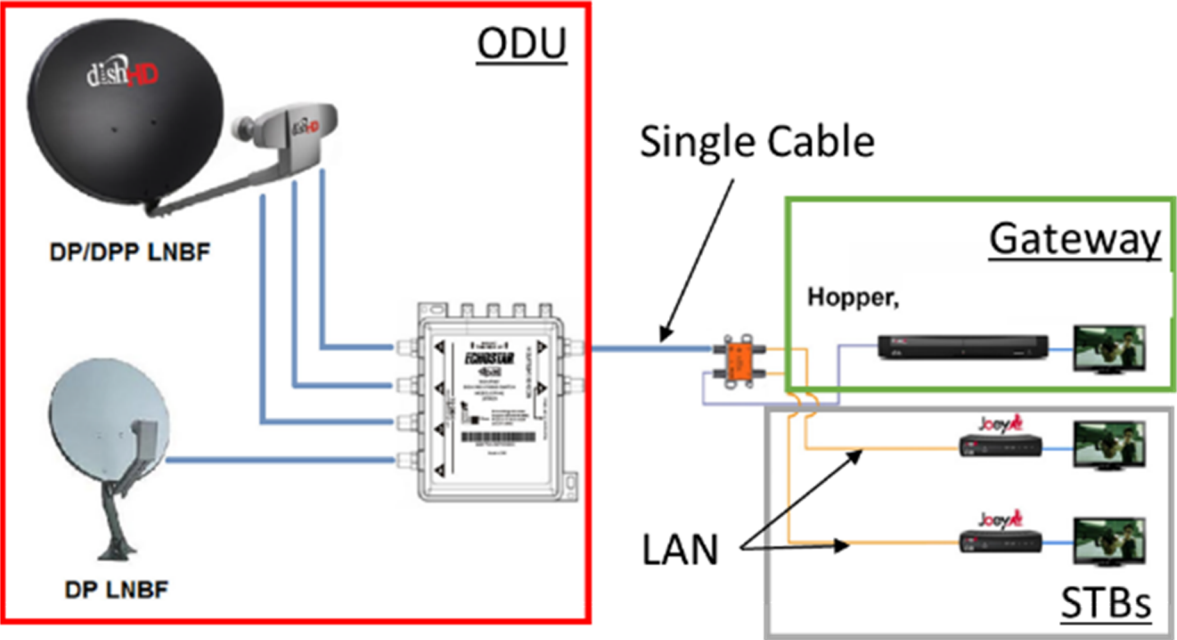
#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
		 <p>The diagram illustrates the DISH satellite television system architecture. It shows two satellite dishes: a 'dish HD' and a 'DP LNBF'. Both are connected to a central receiver unit labeled 'ODU' (Orbital Data Unit). The 'ODU' is connected to a 'Single Cable' which then branches out to a 'Gateway' unit (labeled 'Hopper') and a 'LAN' network. The 'Gateway' unit is connected to a 'Hopper' DVR and two 'STBs' (Set-Top Boxes). The 'LAN' network is connected to the 'Hopper' and the 'STBs'. The 'Hopper' and 'STBs' are connected to televisions.</p> <p>(DPH42 Install Guide, p. 9)</p> <p>The Hopper 3 is the revolutionary whole-home DVR from DISH that includes 16 satellite tuners and a 2TB hard drive.</p> <p>The Joey is the MoCA thin-client receiver that networks with the Hopper for viewing on additional TVs.</p> <p>The 4K Joey is an option for installation on additional 4K TVs.</p>

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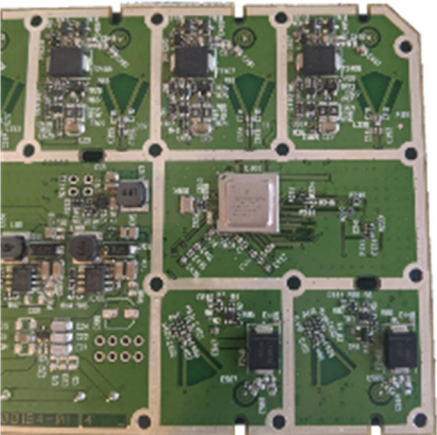
#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
		<p>The Wireless Joey is an option for installation on additional TVs where a coaxial cable connection is not possible or difficult. It communicates with the Hopper via a DISH-dedicated video wireless 802.11ac router.</p>
9c	<p>a signal selector that receives a plurality of broadband LNB signals comprising a plurality of transponder signals, the signal selector is responsive to transponder select information transmitted by the gateway and selects a plurality of transponder signals from at least one broadband LNB signal based on the transponder select information;</p>	<p>The gateway systems include a signal selector that receives a plurality of broadband LNB signals comprising a plurality of transponder signals, the signal selector is responsive to transponder select information transmitted by the gateway and selects a plurality of transponder signals from at least one broadband LNB signal based on the transponder select information as described below:</p> <p>DISH PRO HYBRID 42 SWITCH: This switch allows two Hopper 3 DVRs to be installed using a single DISH traditional 1000.2 antenna. Each Hopper 3 forms its own MoCA video network with connected Joeys. The switch comes with a 110VAC power supply unit.</p> <p>The DPH42 includes a Broadcom BCM4552 SoC.</p> 

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		<p data-bbox="716 240 1010 264">Inputs from Satellite Dish</p>  <p data-bbox="716 854 1373 878">Analog-to-Digital Converters Converting Signals from Satellite Dish</p> 

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#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
		<p>BCM4554 Press Release Discloses:</p> <p>Broadcom's BCM4554 offers a higher level of integration while consuming less power than the previous generation chipset. It also enables direct sampling of low-noise block (LNB) outputs across worldwide ODU satellite markets. The simplified design of Broadcom's new ODU chipset allows 32 DVB-S2 channels to be stacked on a single coaxial cable to service any STB in a home, simplifying and reducing satellite operator installation costs.</p> <p>Key Features and Benefits:</p> <ul style="list-style-type: none"> • Second generation with reduced power and better integration in 28 nm process • 4 RF inputs and 1 RF output covering the 250 to 2350 MHz frequency range • 32 user-band output channels • 32 output channels selectable from any LNB input • Frequency shift keying (FSK) and digital satellite equipment control (DISEqC)
9d	a frequency translator coupled to the signal selector that is capable of shifting the selected transponder signals to new carrier frequencies to produce RF signals; and	The gateway systems include a frequency translator coupled to the signal selector that is capable of shifting the selected transponder signals to new carrier frequencies to produce RF signals as described below:

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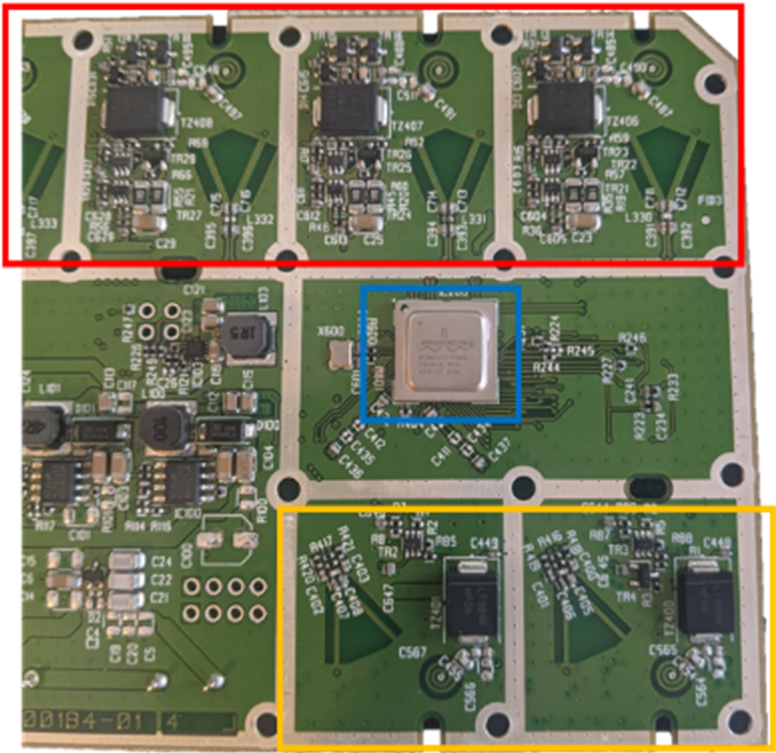
#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
		 <p>Technology Advantages:</p> <ul style="list-style-type: none"> • <u>Drives future TV</u>: leapfrogs current analog architecture by moving to digital and supporting up to 24 minimally spaced channels; opens up the ability to stream independent HD broadcast streams and IP services from a single cable to multiple connected devices, delivering next-generation satellite TV. • <u>Simplifies installation and upgrades</u>: Broadcom's stacked channel technology allows single cable installation, which significantly reduces the cost and complexity for installs and upgrades with better home theater aesthetics for subscribers. • <u>Full-Band Capture (FBC)</u>: Broadcom's digital tuning technology digitizes the entire spectrum enabling more efficient and flexible distribution of video streams and IP services. • <u>Lower system cost</u>: replaces multiple analog ODU chips with a single lower cost mixed signal chip.

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#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
9e	a signal combiner coupled to at least one frequency translator capable of combining at least two RF signals to produce a composite signal;	<p>The gateway systems include a signal combiner coupled to at least one frequency translator capable of combining at least two RF signals to produce a composite signal as described below:</p> <p>Technology Advantages:</p> <ul style="list-style-type: none"> • <u>Drives future TV</u>: leapfrogs current analog architecture by moving to digital and supporting up to 24 minimally spaced channels; opens up the ability to stream independent HD broadcast streams and IP services from a single cable to multiple connected devices, delivering next-generation satellite TV. • <u>Simplifies installation and upgrades</u>: Broadcom's stacked channel technology allows single cable installation, which significantly reduces the cost and complexity for installs and upgrades with better home theater aesthetics for subscribers. • <u>Full-Band Capture (FBC)</u>: Broadcom's digital tuning technology digitizes the entire spectrum enabling more efficient and flexible distribution of video streams and IP services. • <u>Lower system cost</u>: replaces multiple analog ODU chips with a single lower cost mixed signal chip.
9f	wherein the modulation of the composite signal is the same as the modulation of the broadband LNB signals and wherein the composite signal is transmitted to the gateway and the gateway receives the composite signal, decodes specific programs, and distributes the programs over a digital local area network (LAN) to STBs.	<p>The modulation of the composite signal is the same as the modulation of the broadband LNB signals and wherein the composite signal is transmitted to the gateway and the gateway receives the composite signal, decodes specific programs, and distributes the programs over a digital local area network (LAN) to STBs as described below:</p> <p>Technology Advantages:</p> <ul style="list-style-type: none"> • <u>Drives future TV</u>: leapfrogs current analog architecture by moving to digital and supporting up to 24 minimally spaced channels; opens up the ability to stream independent HD broadcast streams and IP services from a single cable to multiple connected devices, delivering next-generation satellite TV. • <u>Simplifies installation and upgrades</u>: Broadcom's stacked channel technology allows single cable installation, which significantly reduces the cost and complexity for installs and upgrades with better home theater aesthetics for subscribers. • <u>Full-Band Capture (FBC)</u>: Broadcom's digital tuning technology digitizes the entire spectrum enabling more efficient and flexible distribution of video streams and IP services. • <u>Lower system cost</u>: replaces multiple analog ODU chips with a single lower cost mixed signal chip.

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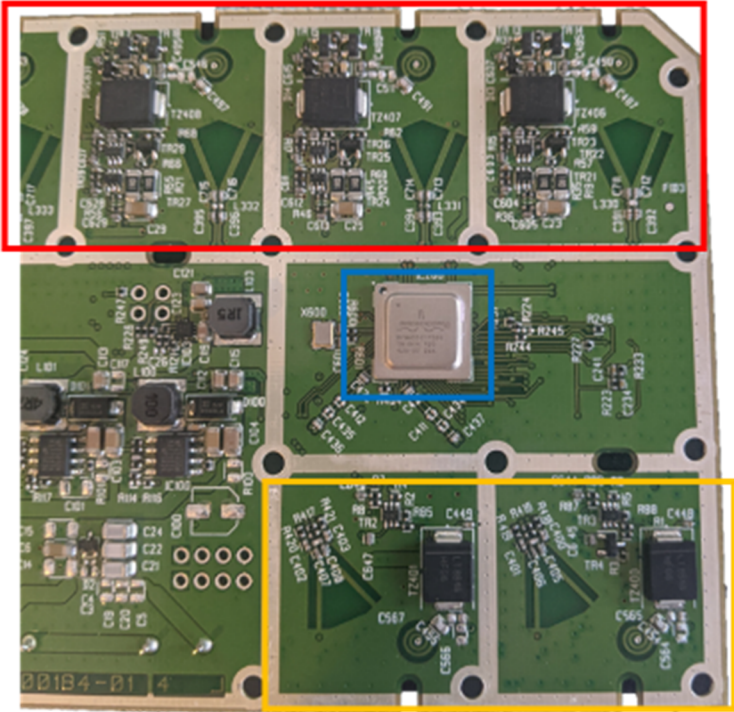
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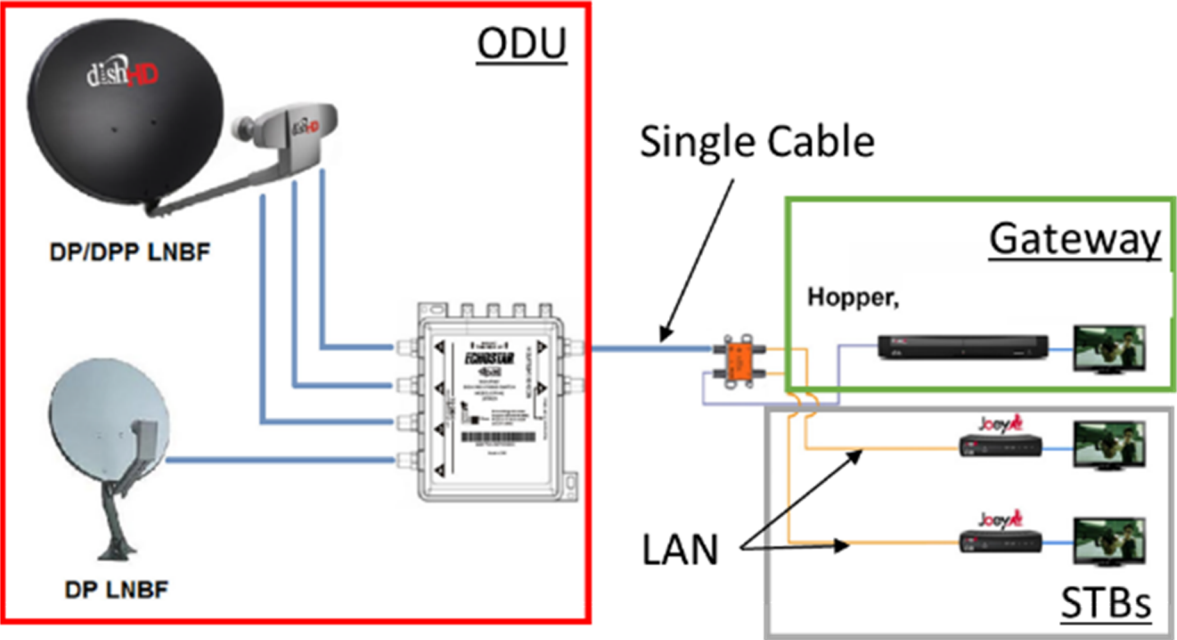
#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
		 <p>The diagram illustrates the DISH satellite television system architecture. It shows two satellite dishes: a larger 'dish HD' dish connected to a 'DP/DPP LNBF' and a smaller dish connected to a 'DP LNBF'. Both LNBFs are connected to a central 'ODU' (Outdoor Unit) via blue lines. The ODU is connected to a 'Single Cable' which then branches into a 'Gateway' and 'STBs' (Set-Top Boxes). The Gateway is connected to a 'Hopper' (DVR) and is also connected to a 'LAN' network. The LAN network is connected to multiple 'Joey' (thin-client receivers) which are connected to additional TVs. The STBs are also connected to the LAN network.</p> <p>The Hopper 3 is the revolutionary whole-home DVR from DISH that includes 16 satellite tuners and a 2TB hard drive.</p> <p>The Joey is the MoCA thin-client receiver that networks with the Hopper for viewing on additional TVs.</p> <p>The 4K Joey is an option for installation on additional 4K TVs.</p> <p>The Wireless Joey is an option for installation on additional TVs where a coaxial cable connection is not possible or difficult. It communicates with the Hopper via a DISH-dedicated video wireless 802.11ac router.</p>

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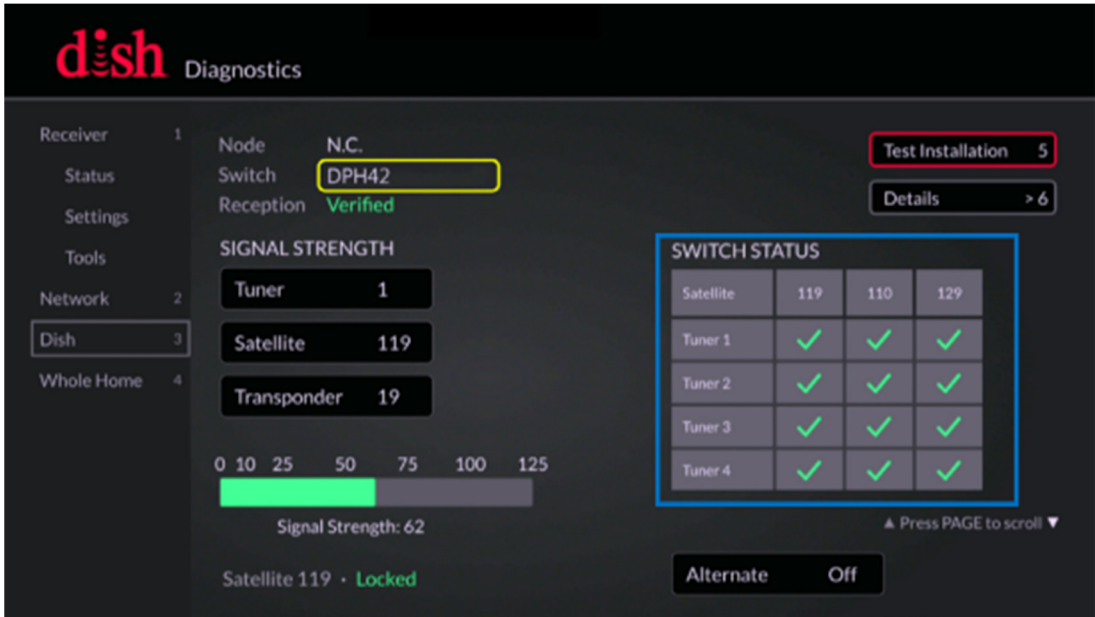
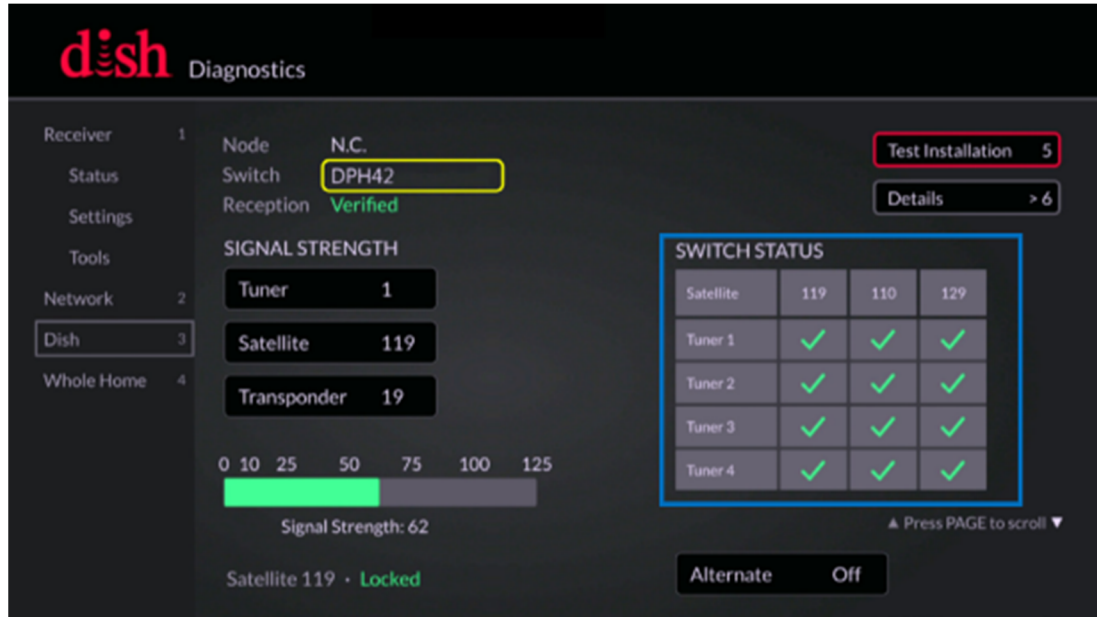
#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
10	10. The signal distribution system of claim 9 wherein a translation table maps original channel locations on the selector input to new channel locations on the selector output.	<p>Upon information and belief, a translation table maps original channel locations on the selector input to new channel locations on the selector output as described below:</p>  <p>The screenshot shows the DISH Diagnostics interface. On the left is a navigation menu with options: Receiver, Status, Settings, Tools, Network, Dish (highlighted), and Whole Home. The main display area shows the following information:</p> <ul style="list-style-type: none"> Receiver 1: Node N.C., Switch DPH42 (highlighted with a yellow box), Reception Verified. SIGNAL STRENGTH: Tuner 1, Satellite 119, Transponder 19. A progress bar shows a signal strength of 62. SWITCH STATUS (highlighted with a blue box): A table showing the status of four tuners across three satellites (119, 110, 129). All tuners show a green checkmark for all satellites. Test Installation 5 (highlighted with a red box) and Details > 6 button. Alternate Off button.
11	11. The signal distribution system of claim 10 wherein the translation table is maintained by a controller located in the gateway and the translation table is communicated to devices in the network.	Upon information and belief, the gateway maintains the translation table and communicates the translation table to the STBs via the network.

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#	U.S. Patent No. 7,542,715	DISH Accused Satellite Television Services
12	12. The signal distribution system of claim 10 wherein the translation table is maintained by a controller located in the ODU and the translation table is communicated to devices in the network.	<p>Upon information and belief, the translation table is maintained by a controller located in the ODU and the translation table is communicated to devices in the network.</p>  <p>The screenshot displays the DISH Diagnostics interface. On the left, a sidebar lists navigation options: Receiver, Status, Settings, Tools, Network, Dish (highlighted), and Whole Home. The main area shows the following information:</p> <ul style="list-style-type: none"> Receiver 1: Node N.C., Switch DPH42 (highlighted with a yellow box), Reception Verified. SIGNAL STRENGTH: A horizontal bar graph with a scale from 0 to 125. The bar is filled to the 62 mark. Below the graph, it reads "Signal Strength: 62" and "Satellite 119 · Locked". SWITCH STATUS: A table showing the status of four tuners across three satellites (119, 110, 129). All tuners show a green checkmark, indicating they are active. Buttons: "Test Installation 5" (highlighted with a red box), "Details > 6", "Alternate Off", and "Press PAGE to scroll".